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CARBIDE AND CARBON CHEMICALS DIVISION

UNION CARBIDE AND CARBON CORPORATION

UCC

POST OFFICE BOX P

OAK RIDGE, TENN.

January 23, 1951

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KB-234

RHTG-10,108

United States Atomic Energy Commission
Post Office Box "E"
Oak Ridge, Tennessee

Subject: Alterations to the
K-131 Crude Feed
Facility

Change Recommendation Number 1071

Attention: Director of Production and Engineering

Gentlemen:

1. Introduction: This Change Recommendation covers necessary alterations and installations to increase the partially depleted feed capacity of the K-131 Crude Feed Facility. The increased capacity of this facility will be required to meet an accelerated K-25 production program.

2. Purpose and/or Necessity: With the on-stream operation of the K-29 and K-31 Plants, the plant waste concentration will be lowered and more partially depleted feed will be needed by cascade operations for maximum production. It is anticipated that by July, 1951 between 600 and 1,000 lbs./hr. of partially depleted feed will be needed for cascade operations.

All partially depleted feed at present is stored in chlorine type drums. In addition to this feed, there is on hand approximately 250,000 lbs. of S-50 material stored in similar drums. With the on-stream operation of K-29 and K-31, it is planned to process this material in conjunction with partially depleted feed.

At present the depleted feed facility has a design capacity of 250 lbs. of feed/hr. with a maximum of 350 lbs./hr. obtainable for short periods. Such limited capacity cannot meet the anticipated requirements during the forthcoming year.

As the K-131 Feed Plant increases production, less crude feed will be needed from K-131; the crude feed equipment thus released can be altered and utilized to accommodate the partially depleted feed stored in the chlorine type drums. Therefore, it is recommended that such alterations be accomplished in the K-131 Building, which will permit handling up to a maximum of 1,500 lbs. of partially depleted feed/hr. when all the small baths are converted to handle the chlorine type cylinders.

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Classification Changed to UNCLASSIFIED

By Authority of

PGD-7

Classification Authority

T. F. Davis, Analysis Corp.

RB Marlin 3-26-80

3-9-90

Date 1/2

4/96

ChemRisk Document No. 2682

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3. Scope:

will be revised as follows:

The K-131 vaporizing system

- a. A monorail and hoist of four ton capacity with all necessary controls and electrical service will be installed in the Feed Drum Room to serve Drum Baths "A", "B", "C", and "D" as shown on the attached drawings D-AWS-13257 and D-AWE-13585.
- b. Four drum baths A, B, C, and D will be altered as shown on the attached drawing D-AMP-13123. It is planned to alter only the "D" bath at this time. The remaining baths included in this estimate will be altered at a later date, as the K-1131 feed plant increases production.
- c. Instrumentation for all baths will be installed in K-131 and K-402-4 as shown on the attached drawing D-ID-1686A.

4. Cost Estimate:
(copy attached)

<u>Labor</u>	<u>Material</u>	<u>Contingencies</u>	<u>Allocated Plant Expense</u>	<u>Total</u>
\$8,704	\$13,196	\$2,200	\$9,600	\$33,700

This work will be accomplished as manpower and/or materials become available. It is estimated that eighteen weeks will be required to complete this work after date of approval.

5. Source of Funds:

Costs for this work are budgeted for in the current fiscal year (Report KAD-86) under Program 2000, Activity 2310, item entitled "Production of Enriched Uranium Hexafluoride".

The Carbide and Carbon Chemicals Division of UC&CC recommends that this work as proposed under Change Recommendation No. 1071 receive your approval.

Very truly yours,

W. B. Humes

W. B. Humes
K-25 Superintendent

W. B. Humes
RMB:DEW:bfc

with attachments

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U.S.A.E.C.

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January 23, 1951

cc: U.S.A.E.C. (6) —
Mr. C. E. Center
Mr. W. B. Humes
Mr. S. J. Crozier
Mr. R. M. Batch
Mr. J. P. Murray
Mr. Oral Rinehart
Mr. E. C. Bollinger
Mr. M. F. Schweann
Mr. R. W. Ulin
Mr. D. E. Williams K-25RC
Mr. H. L. Barnett
Mr. J. R. Crittenden
Mr. H. G. LaDue

Job Expense Account: 17319-478

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COST ESTIMATE
Plant Engineering Department

W.O. 418 995

C.R. 1071

Date: January 24, 1951

Drawing No. D-AWS-13257-0

Acct. Charge 17319-478

Job Engineer: Williams

D-ID-1686A-5

D-AWE-13585-1

D-AWF-13123-1

B.M. 3470

Job Description: Rework Four (4) Feed Baths in K-131 Building.

Install New Hoist and Monorail to Service all Four (4) Baths

Labor Break Down		Man Hours	Rate	Amount
1013	Laborers	550	1.40	770.00
1005	Welders	800	1.98	1,584.00
1003	Machinists	100	2.06	206.00
1005	Sheet Metal	350	1.98	693.00
1012	Masons	120	1.90	228.00
1012	Concrete Finishers	120	1.78	213.60
1005	Riggers	750	1.93	1,447.50
1005	Insulators	120	1.90	228.00
1005	Pipefitters	500	1.98	990.00
1012	Painters	150	1.84	276.00
1012	Carpenters	250	1.90	475.00
1002	Process Maintenance	450	1.91	859.50
1003	Valve Shop	8	1.98	15.84
1075	Instrument	48	2.06	98.88
1077	Electricians	300	2.06	618.00
		4616		\$ 8,703.32

1. Direct Labor	<u>\$ 8,704.00</u>	
2. Purchase or Replace Material	<u>13,196.00</u>	
3. Contingencies	<u>2,200.00</u>	
4. Sub-Total		<u>24,100.00</u>
5. Transferred Material		
6. Allocated Plant Expense	<u>9,600.00</u>	
7. Sub-Total		<u>9,600.00</u>
8. Total Estimated Cost		<u>\$ 33,700.00</u>

Estimated by: Lamneck

Checked by: _____